TO Ross Powers
Grosse Ile

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
AIR AND RADIATION DIVISION
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAY 28 1993

REPLY TO THE ATTENTION OF:
(AT-18J)

David Slayton
Waste Management Division
Hazardous Waste Permits Section
P.O Box 30214
Lansing Michigan 48909

Dear Mr. Slayton:

Attached are the results of gamma and gross beta analysis on liquid sump samples from Chem-Met Hazardous Waste Site in Wyandotte, Michigan. Chain-of Custody Procedures were followed during the analysis of the samples.

Recent information provided to the United States Environmental Protection Agency (USEPA) indicated that elevated gross beta levels had been observed by the staff from the Michigan School of Public Health and that attempts to identify the isotopic source of the beta activity had been unsuccessful. In particular, gamma analysis performed by Chem-Met's analytical laboratory (University of Michigan/School of Public Health) indicated that there were no gamma emitting isotopes present that could be correlated to the measured gross beta levels.

Analysis at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama have confirmed the elevated gross beta levels. However, unlike Chem-Met's analytical laboratory, NAREL observed gamma activity, due to naturally occurring K-40, which did correlate with the measured gross beta levels. Therefore, the USEPA feels confident in identifying K-40 as the source of the elevated gross beta activity.

If you have any questions regarding the data, please contact me at (312) 886-0617.

Sincerely yours,

Jack Barnette

Jack Barnette, Chief
Radiation Section

Attachment

cc: George Bruchmann, Chief, w/attachment
Division of Radiological Health

Bob Bowden, Chief, w/o attachment
Emergency Response Branch

NAREL Radiochemical Results For CHEM-MET Water Samples
Wyandotte, MI., Collected 02/23/93

NAREL ID	Sample ID	Gamma 40K pCi/l±2σ	Gross Beta pCi/l±2σ
R5W 93.1966	Sump K-1 #196343	161.0±43.5	144.6±34.6
R5W 93.1967	Sump K-1 #196341	183.0±76.8	137.0±42.9
R5W 93.1968	Sump K-2 #196340	351.0±51.6	384.2±57.4
R5W 93.1969	Sump K-2 #196342	287.0±73.8	389.5±54.2
R5W 93.1970	Sump K-3 #149551	2,930±109	3,504±147
R5W 93.1970X	Sump K-3 #149551	2,910±96	NA
R5W 93.1971	Sump K-3 #196350	2,710±92	3,389±150
R5W 93.1972	Sump K-4 #196344	328.0±53.4	468.0±59.4
R5W 93.1973	Sump K-5 #196346	487.0±71.5	649.4±63.9
R5W 93.1974	Sump K-5 #196345	516.0±58.9	562.2±62.0
R5W 93.1975	Sump K-6 #149552	1,840±80	2,079±109
R52 93.1976	Sump K-6 #149553	1,790±69	2,030±118
R5W 93.1977	Sump K-7, (Run off) #196347	1,580±129	1,926±117
R5W 93.1978	Sump K-7, (Run off) #196349	1,560±74	1,901±114
R5W 93.1979	Sump K-8 #149555	2,010±88	2,129±118
R5W 93.1980	Sump K-8 #149554	1,690±90	1,964±113
R5W 93.1980X	Sump K-8 #149554	1,710±78	NA

NA = Not Analyzed X = Every tenth sample is duplicated as part of NAREL's QA Program

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